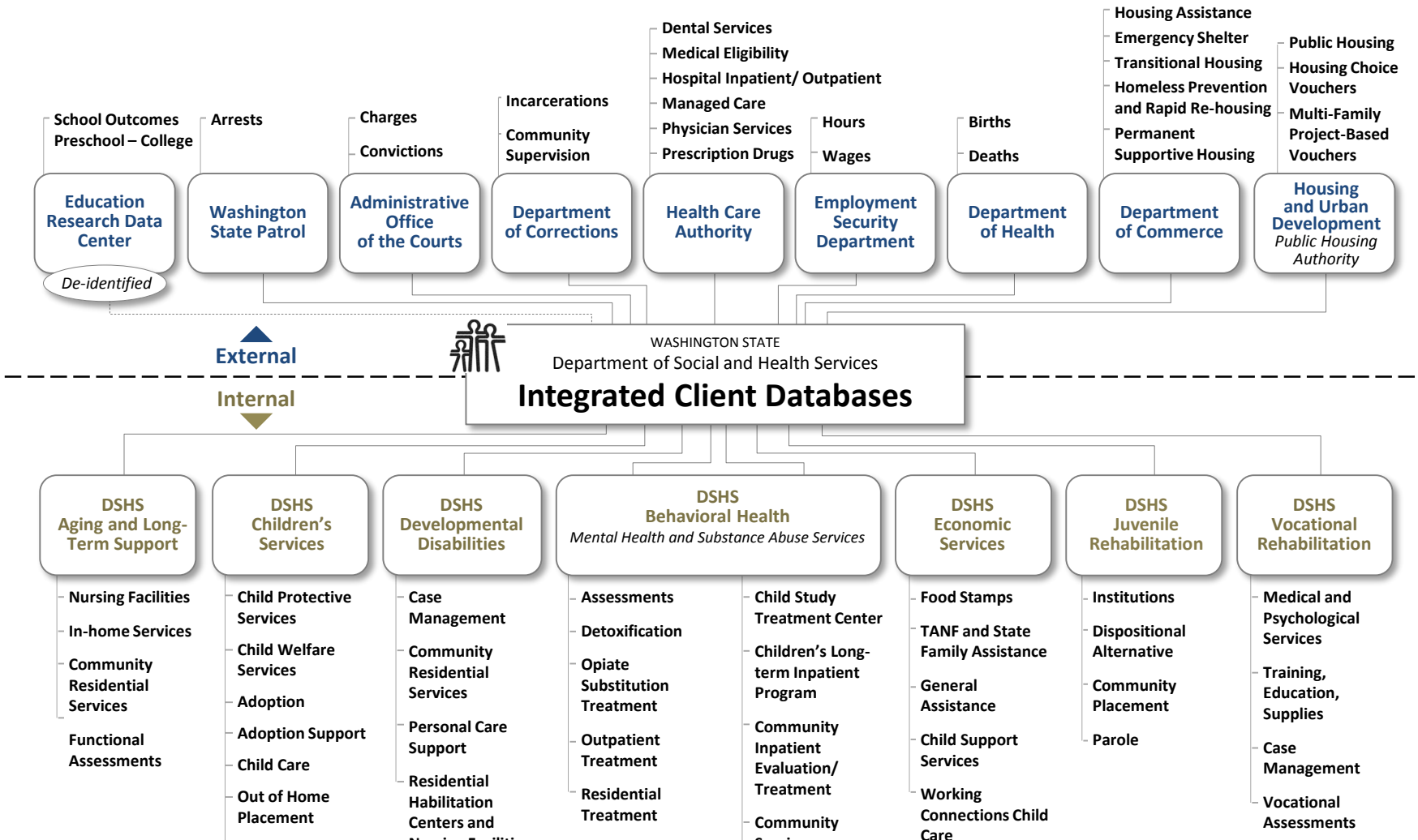
Supporting Delivery System Transformation Through Data Integration and Analytics

David Mancuso, PhD • January 13, 2017

Analytics in the State Social and Health Service Environment

- **Medicaid expenditures are disproportionately concentrated in populations with multiple comorbid physical and/or behavioral health conditions**
- **Overall social and health service program costs are driven by a relatively small number of persons with overlapping risk factors and service needs,** often exacerbated by extreme poverty, trauma, mental illness, substance use disorders, cognitive limitations or functional impairments
- **High-cost clients often have significant social support needs** such as the need for economic, housing or employment support, or interventions to reduce the risk of criminal justice involvement
- **Increased demand to use state agency data to directly inform care**
- **Increased emphasis on quality/outcome measurement and value-based payment structures**

Data Sources in the DSHS Integrated Client Databases

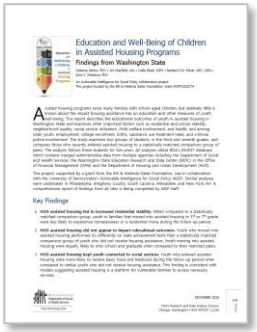


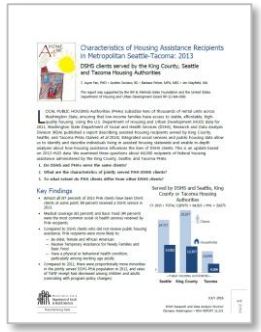
How do we use integrated administrative data?

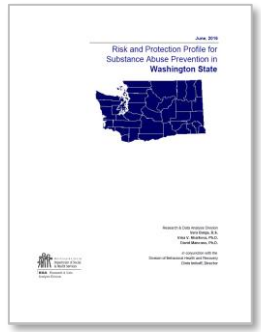
- **Policy analysis**
  - Example: describing the link between ED utilization and prescription narcotic drug-seeking behavior
- **Program evaluation**
  - Example: evaluating the impact of SUD treatment on health care costs and criminal justice involvement
- **Predictive modeling and clinical decision support**
  - Example: dynamic patient-level risk scoring to identify high-risk dual Medicare/Medicaid enrollees for engagement in Health Homes and to support direct patient care
- **Performance measurement**
  - Example: monitoring health care quality, utilization and "social determinant" outcome measures

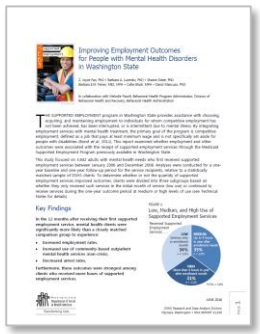
Examples of Policy Analyses (and Other Content) Published in 2016

https://www.dshs.wa.gov/sesa/rda/research-reports





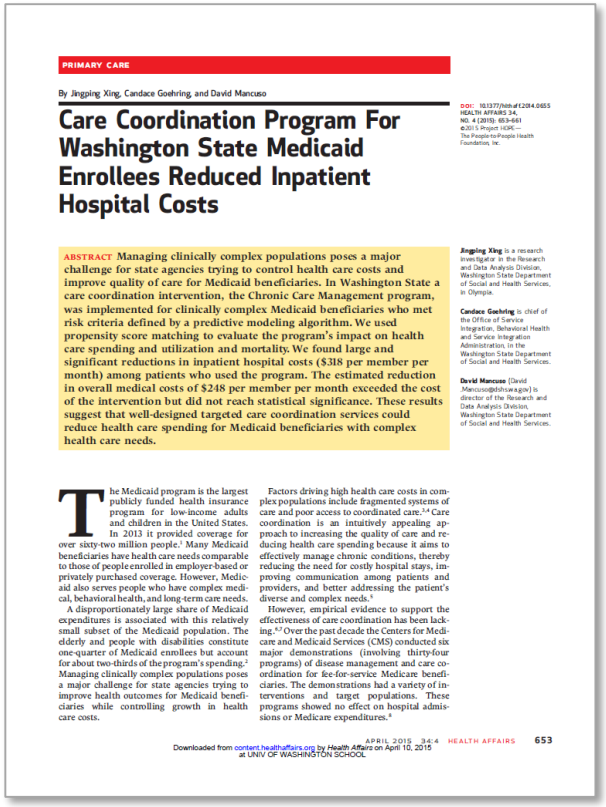




Program Evaluation

Peer-Reviewed Journal Quality Is Possible on a Rapid-Cycle Timeline

- **Example: "Care Coordination Program for Washington State Medicaid Enrollees Reduced Inpatient Hospital Costs" published in April 2015 Health Affairs**
  - Statistically significant reduction in hospital costs
  - Promising reduction in overall Medicaid medical costs



PRIMARY CARE

By Jingping Xing, Candace Goehring, and David Mancuso

Care Coordination Program For Washington State Medicaid Enrollees Reduced Inpatient Hospital Costs

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NO. 4 (2015): 653–661
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ABSTRACT Managing clinically complex populations poses a major challenge for state agencies trying to control health care costs and improve quality of care for Medicaid beneficiaries. In Washington State a care coordination intervention, the Chronic Care Management program, was implemented for clinically complex Medicaid beneficiaries who met risk criteria defined by a predictive modeling algorithm. We used propensity score matching to evaluate the program's impact on health care spending and utilization and mortality. We found large and significant reductions in inpatient hospital costs ($318 per member per month) among patients who used the program. The estimated reduction in overall medical costs of $248 per member per month exceeded the cost of the intervention but did not reach statistical significance. These results suggest that well-designed targeted care coordination services could reduce health care spending for Medicaid beneficiaries with complex health care needs.

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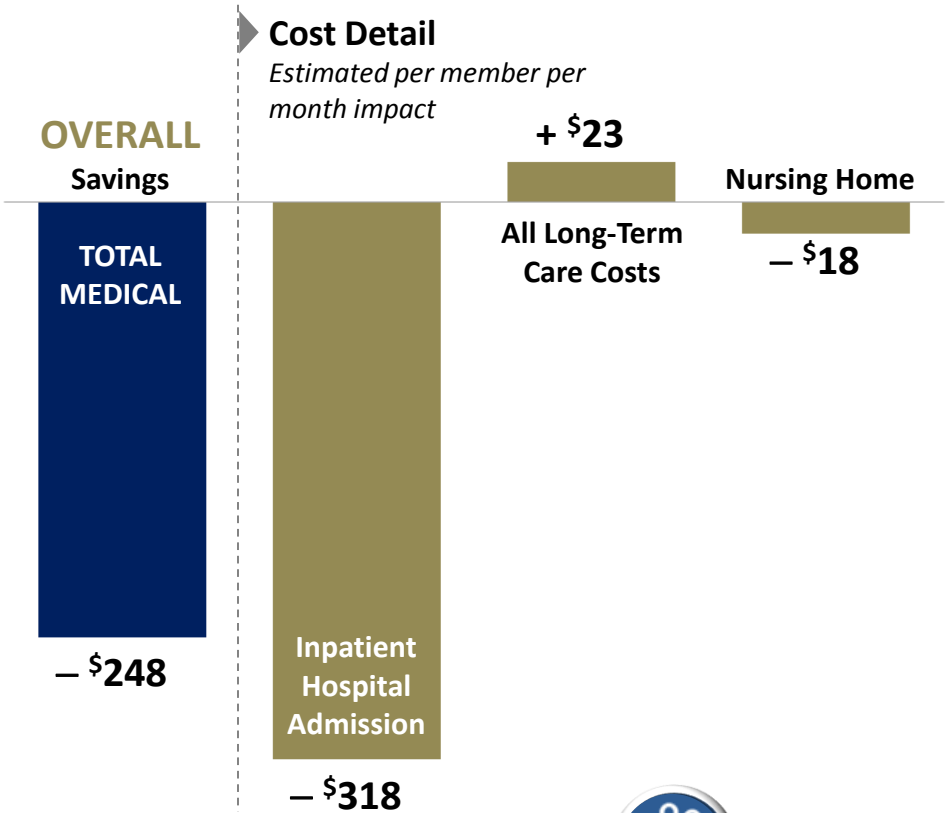
The Medicaid program is the largest publicly funded health insurance program for low-income adults and children in the United States. In 2013 it provided coverage for over sixty-two million people.[1] Many Medicaid beneficiaries have health care needs comparable to those of people enrolled in employer-based or privately purchased coverage. However, Medicaid also serves people who have complex medical, behavioral health, and long-term care needs.

A disproportionately large share of Medicaid expenditures is associated with this relatively small subset of the Medicaid population. The elderly and people with disabilities constitute one-quarter of Medicaid enrollees but account for about two-thirds of the program's spending.[2] Managing clinically complex populations poses a major challenge for state agencies trying to improve health outcomes for Medicaid beneficiaries while controlling growth in health care costs.

Factors driving high health care costs in complex populations include fragmented systems of care and poor access to coordinated care.[3,4] Care coordination is an intuitively appealing approach to increasing the quality of care and reducing health care spending because it aims to effectively manage chronic conditions, thereby reducing the need for costly hospital stays, improving communication among patients and providers, and better addressing the patient's diverse and complex needs.[5]

However, empirical evidence to support the effectiveness of care coordination has been lacking.[6,7] Over the past decade the Centers for Medicare and Medicaid Services (CMS) conducted six major demonstrations (involving thirty-four programs) of disease management and care coordination for fee-for-service Medicare beneficiaries. The demonstrations had a variety of interventions and target populations. These programs showed no effect on hospital admissions or Medicare expenditures.[8]

http://content.healthaffairs.org/search?submit=yes&fulltext=care+coordination+program+for+washington+state+medicaid+enrollees+reduced+inpatient+hospital+costs&x=0&y=0



Predictive Modeling and Clinical Decision Support

Achieving Profound Savings Supporting Direct Client Care

The CMS Blog

The official blog for the Centers for Medicare & Medicaid Services (CMS) responsible for Medicare, Medicaid and CHIP. For more information, please visit www.cms.gov

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Washington MFFS Preliminary Evaluation Report

JANUARY 22

By Patrick Conway, M.D., CMS Principal Deputy Administrator and Chief Medical Officer

Today we released a report summarizing preliminary results from the Washington Health Homes demonstration under the Medicare-Medicaid Financial Alignment Initiative. This demonstration, which began serving enrollees in July 2013, seeks to leverage Medicaid health homes to improve service quality and integration while reducing costs of care for high-risk, high-cost Medicare-Medicaid enrollees (sometimes referred to as "dual eligibles") in Washington State.

More than 10.7 million Americans are enrolled in both the Medicare and Medicaid programs. A longstanding barrier to improving quality and reducing costs of care for Medicare-Medicaid enrollees has been a lack of alignment and cohesiveness between the two programs, including misaligned incentives for payers and providers. The Washington Health Homes demonstration tests new mechanisms to coordinate services across Medicare and Medicaid for Washington State Medicare-Medicaid enrollees, and allows the State and the Federal governments to share in savings resulting from quality improvements.

The preliminary results in this report are based on experience during the first demonstration performance period, from July 2013 – December 2014. Despite the relatively short time period, estimates show a reduction of $21.6 million in Medicare spending relative to a comparison group, representing more than 6% savings. Future analysis will include Medicaid spending estimates as the data become available.

The report also includes early quality and utilization results, eligibility and enrollment data, characteristics of the population eligible for the demonstration, beneficiary focus group findings, and a discussion of the initial implementation experience.

While these findings are preliminary, they provide an encouraging first look at how efforts in Washington to improve quality of care by focusing on the needs of high-risk, high-cost members can reduce Medicare spending.

continued

Washington State's **PRISM predictive modeling and clinical decision support application** supports a Medicare-Medicaid Dual Eligible Demonstration that produced **$21.6 million in Medicare savings** in its first year

Lessons Learned: Keys to Washington State's Success

- Senior agency leadership recognizing potential for integrated data analytics to support improved service delivery
- Maintaining connection between analytic staff and program operations
- Supporting service delivery systems rather than "academic" interests
- Maintaining a commitment to analytical integrity to build trust with other agencies, the Legislature, and external stakeholders
- Commitment to engage data owners in timely review of sensitive results before public release
- Initial development occurred within a single large umbrella agency
- Integration of new sources dependent on external partner agency interest

Lessons Learned: Data Integration Challenges

- Obtaining the necessary financial resources
- Establishing effective cross-agency governance structures
- Building and maintaining trust among data owners, including addressing privacy concerns
- Conscripting time from state agency subject matter experts
- Maintaining support of constantly evolving state agency leadership
- Maintaining an analytical data infrastructure in a constantly evolving policy, program and IT system environment
- Recruiting and retaining internal staff with analytical expertise, or finding external contractors with relevant subject matter expertise
- Data are plentiful – analytical skills informed by policy and program expertise are scarce

Questions?

https://www.dshs.wa.gov/sesa/rda/research-reports